



CFPP Suralaya (1 x 625 MW)



CFPP Rembang (3 x 315 MW)



CFPP Indramayu (3 x 330 MW)



CFPP Lontar (3 x 315 MW)



CFPP Labuan (2 x 300 MW)

Future Outlook PLN's Coal Fired Power Plant

Helmi Najamuddin, Head of Coal Division – 27 Jan 2012, for JCOAL - Japan



CFPP Pacitan (2 x 315 MW)



CFPP Kendari (2 x 10 MW)



CFPP Tj. Balai Karimun (2 x 7 MW)



CFPP Barru (2 x 50 MW)



1. Company Overview
2. Coal Overview
3. Update 10 000 MW – Fast Track Program Phase I
4. Coal Policy in PLN
5. Business Opportunities



1. Company Overview



Corporate Structure



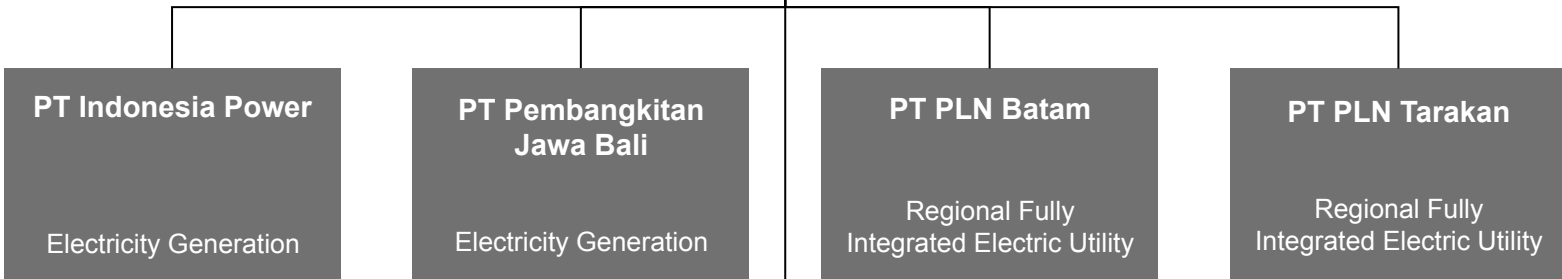
Ministry of State Owned Enterprises (MSOE)
Ministry of Energy and Mineral Resources (MEMR)
Ministry of Finance (MoF)
Ministry of the Environment
National Development Planning Authority (BAPPENAS)

Oversight



100% Owned by Government of Indonesia

PT PLN (Persero)



Note: Excludes Joint Ventures.

Introduction



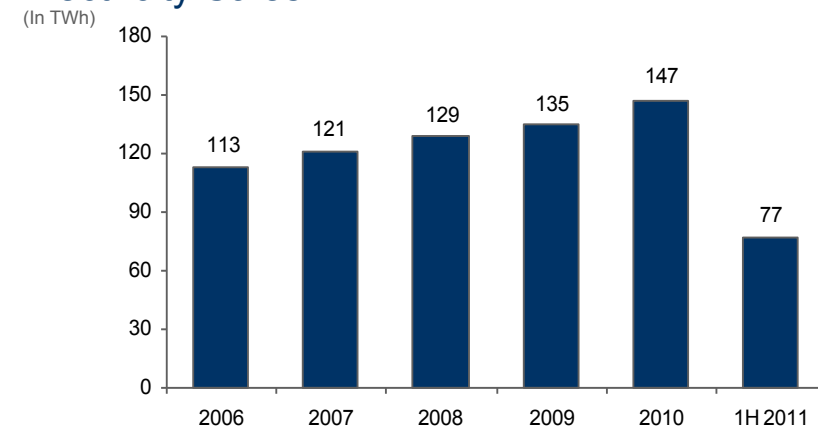
PLN is the only state-owned power utility company and the only fully-integrated power utility company in Indonesia.

- PLN is Indonesia's state-owned electric utility company, wholly-owned by the Republic of Indonesia and is represented by the Ministry of State-Owned Enterprises (SOEs)
- PLN is the major provider of all public electricity and electricity infrastructure in Indonesia, including power generation, transmission, distribution and retail sales of electricity
- Charges for electricity are based on electricity tariff rates that are set by the Government
 - Law No. 19/2003 on SOEs: the Government is obligated to provide a subsidy to PLN for the difference between the price charged for electricity and the cost to produce electricity

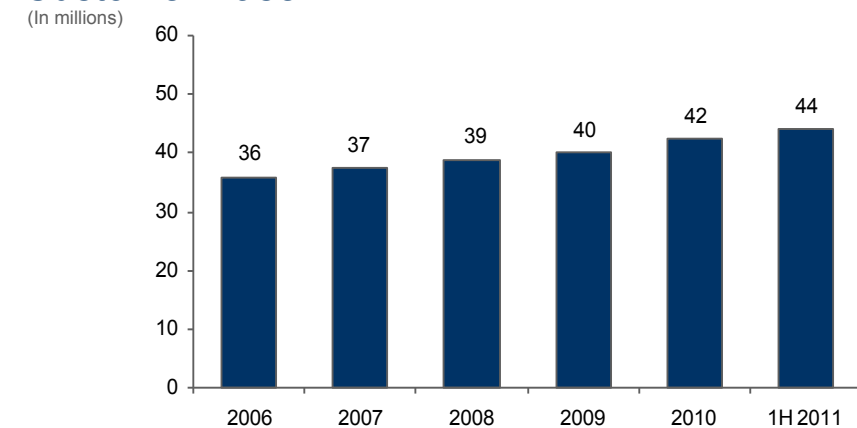
Key Business Segments

Generation	Transmission	Distribution
<ul style="list-style-type: none">• Controls approximately 28,308 MW of installed generating capacity, over 85% of Indonesia's total• Owns and operates 1,261 generation plants• Main purchaser of electricity from Independent Power Producers (IPPs)	<ul style="list-style-type: none">• Sole provider of power transmission in Indonesia• Approximately 36,741 kmc of transmission lines• 66,354 MVA of transmission transformer capacity	<ul style="list-style-type: none">• Sole distributor of electricity to end customers in Indonesia ⁽¹⁾• Approximately 685,785 kmc of distribution lines and 36,430 MVA of transformer capacity• Serving approximately 44 million customers

Electricity Sales



Customer Base

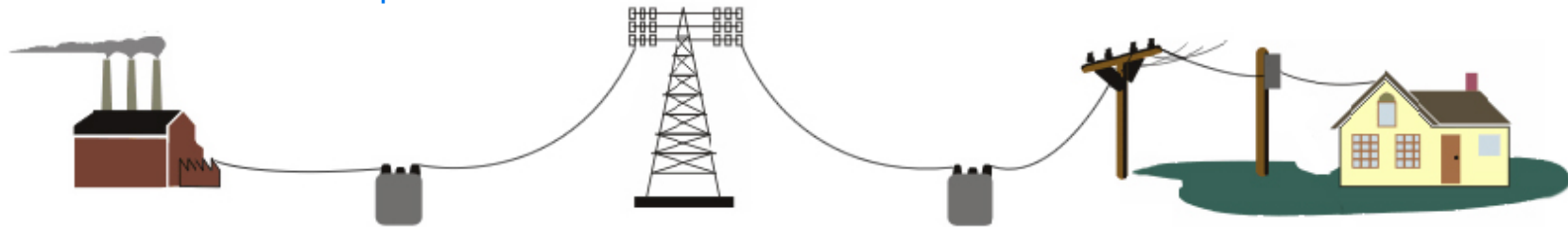


(1) PLN is also the provider of electricity of last resort, in that if PLN is not supplying a particular area and there are no regional-owned companies, private enterprises or cooperatives that elect to supply electricity in that area, the Government is obligated to instruct SOEs (which includes PLN) to supply electricity to the area.

2 Dominant Presence in the Indonesian Electricity Market



PLN is the only integrated electric utility company in Indonesia, controls the majority of generation capacity and is the sole transmission and distribution provider.



Generation

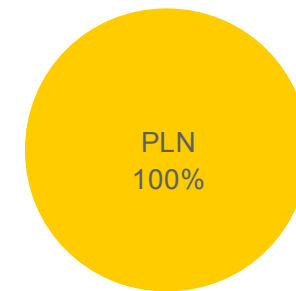
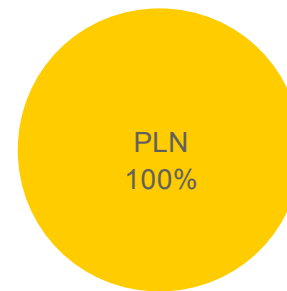
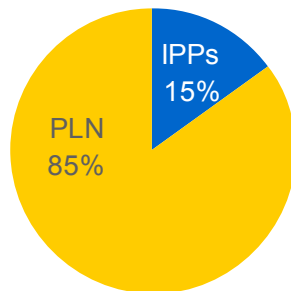
Transmission

Distribution

- 28,308 MW of installed capacity out of 33,251 MW in Indonesia ⁽¹⁾

- 36,741 kmc of transmission lines
- 66,354 MVA of transmission transformer capacity

- 685,785 kmc of distribution lines
- 36,430 MVA of transformer capacity



- PLN remains the country's largest electricity producer and the only business entity in charge of transmitting and distributing electric power in Indonesia
- Under the New Electricity Law (No. 30/2009), SOEs, which includes PLN, have the first priority to decide whether to be the electricity supplier for the public needs of a specified area before such right can be awarded to anyone else
 - If PLN declines to undertake a public electricity supply business for a certain area, the Government or regional governments may offer this right to regional-owned companies, private enterprises or cooperatives
 - If there are no regional-owned companies, private enterprises or cooperatives that elect to supply electricity in that area, the Government is obligated to instruct SOEs (which includes PLN) to supply electricity to the area

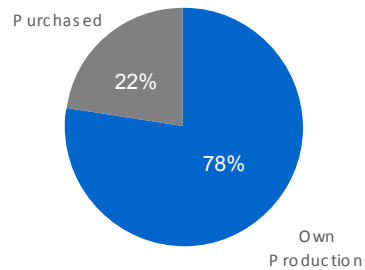
(1) As of June 30, 2011.

Business Snapshot as of June 30, 2011



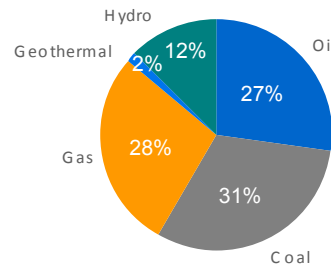
PLN distributes and sells electricity to several customer types. The electricity sold is either generated by PLN or purchased from IPPs.

Generation Composition



Total: 88,751 GWh

Generating Capacity



Total: 28,308 MW

Transmission Network Detail

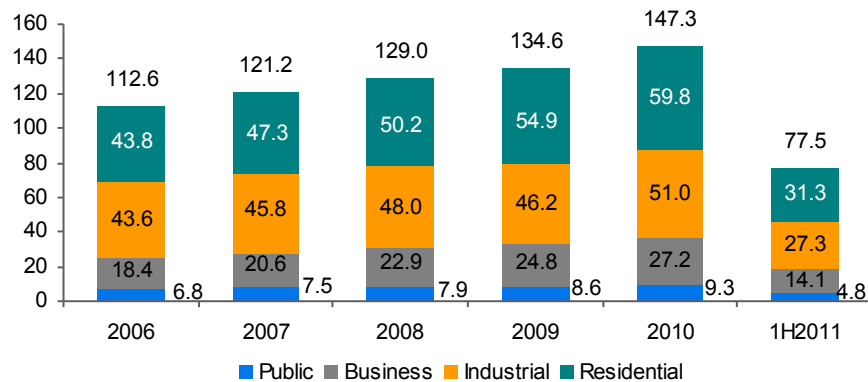
- 500 kV interconnected transmission system with 5,092 kilometers-circuits
- 150 kV transmission system with 26,733 kilometers-circuits
- 4,916 kilometers-circuits of transmissions systems up to 70 kV
- Transformer capacity of 66,354 MVA

Distribution Network Detail

- Medium-voltage line distribution network of 278,277 kilometers-circuits
- Low-voltage line distribution network of 407,508 kilometer-circuits
- 300,149 units of distribution transformers with total capacity of approximately 36,430 MVA

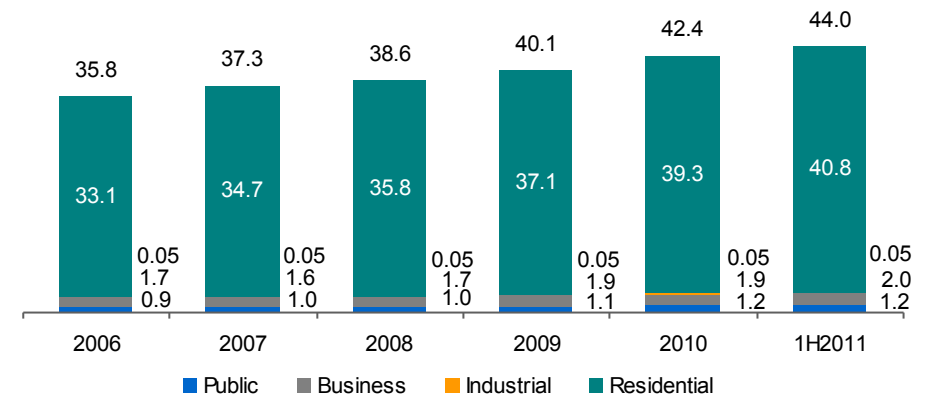
Electricity Transmitted and Distributed by Customer Type

(in TWh)



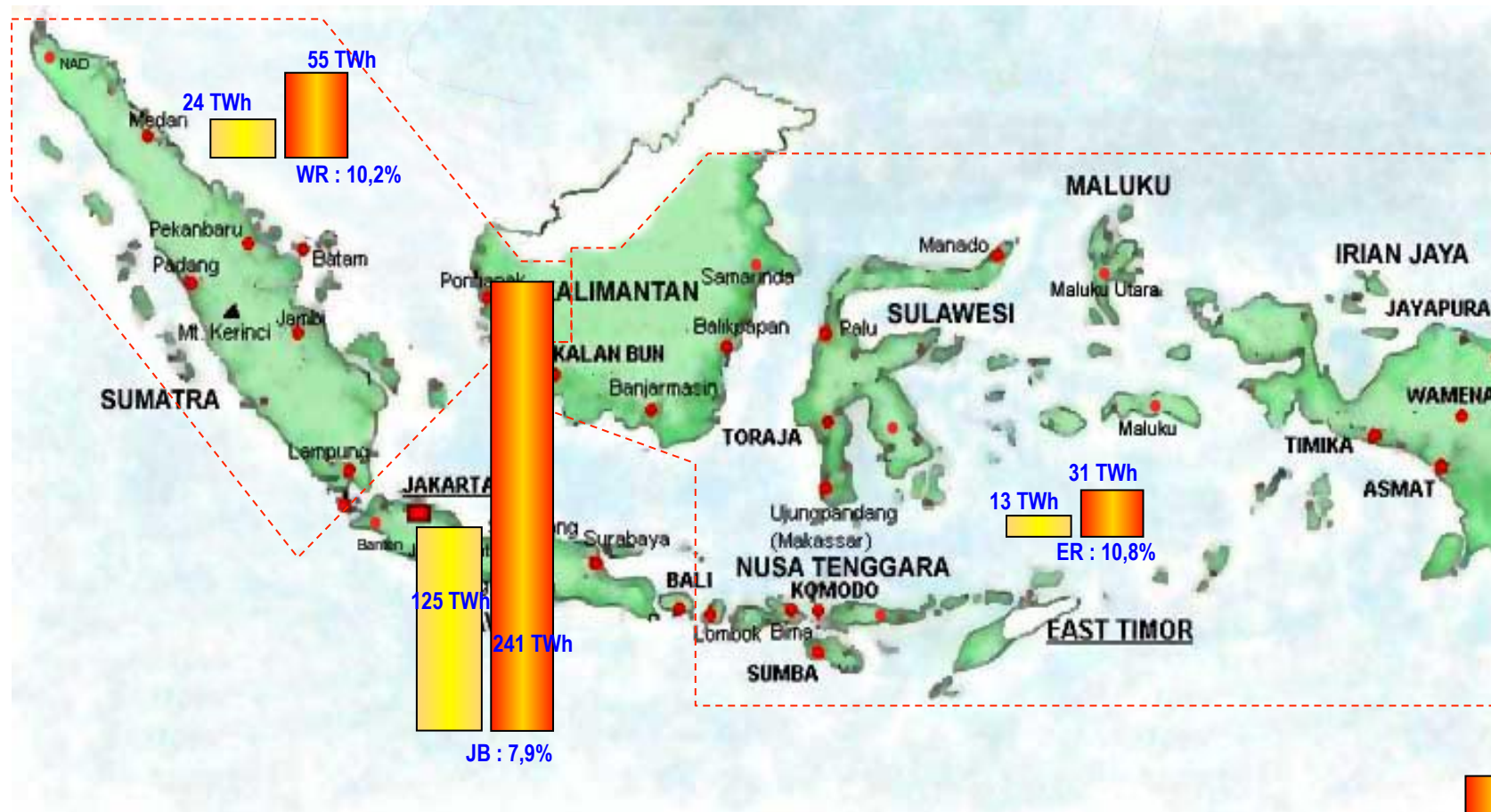
Number of Customers by Type

(in millions)

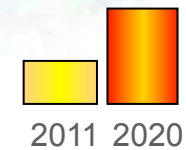




Demand Forecasting 2011- 2020



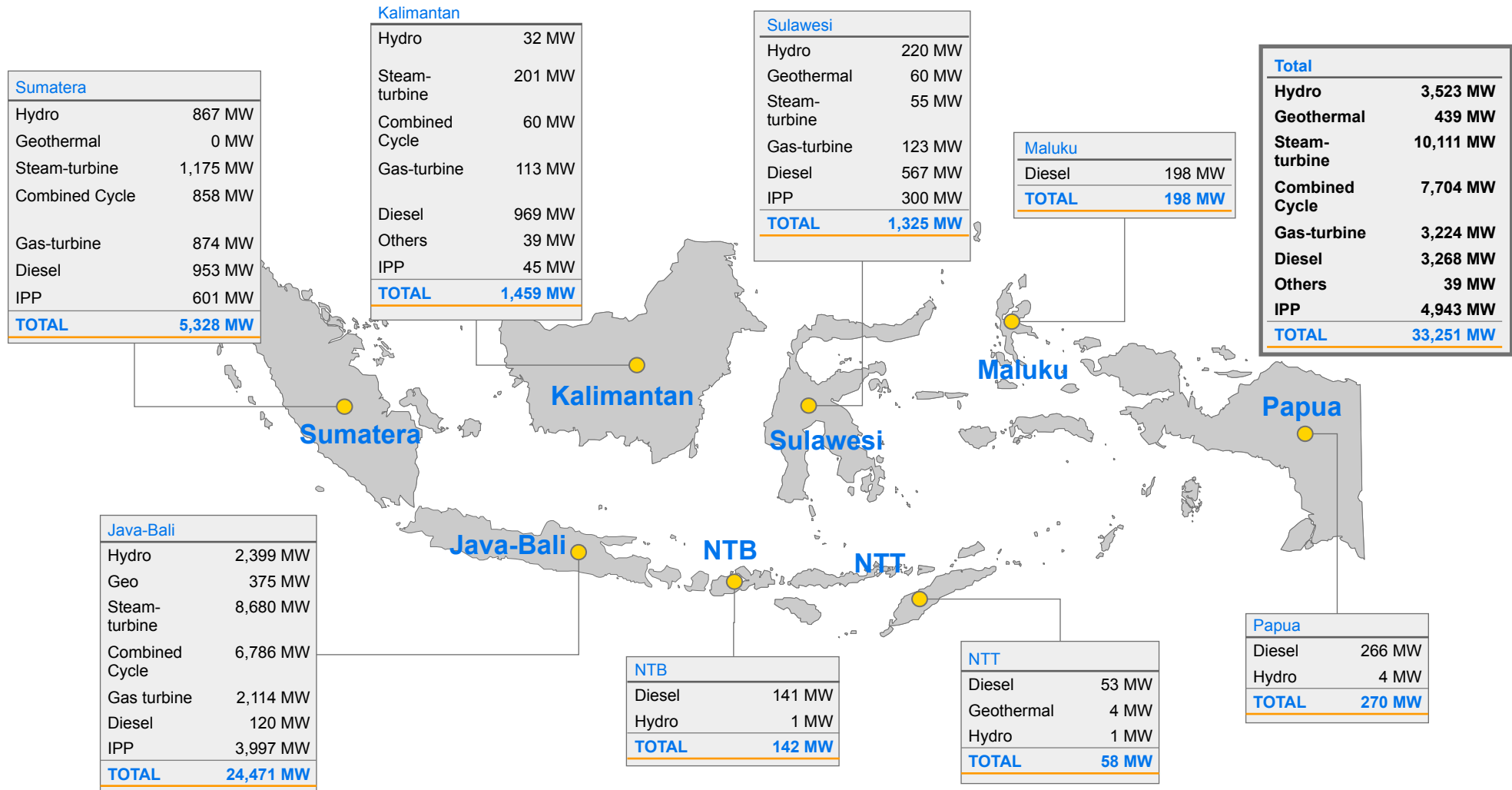
Electricity demand grows at around 9% per year



Extensive Generation Network as per June 2011



PLN has an extensive generation portfolio with total installed capacity of approximately **33,251 MW** across Indonesia.



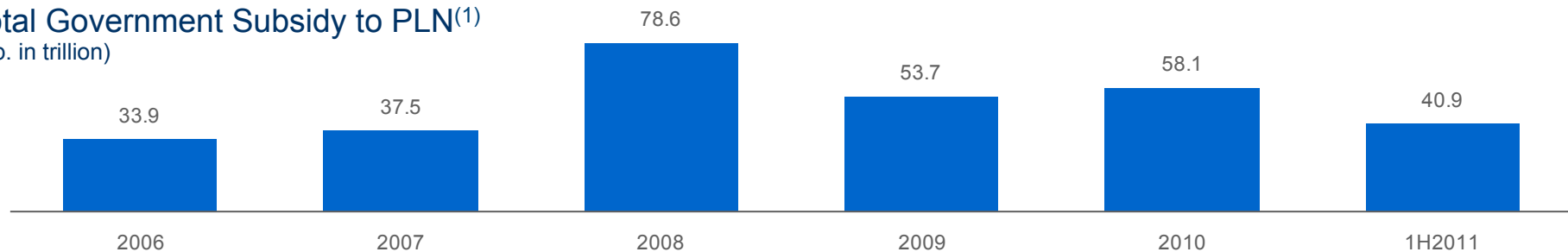
1 Strong Government Support



The Government of Indonesia's active involvement emphasizes the importance of PLN's role in ensuring stable electricity supply in Indonesia.

<p>Government Financial Assistance</p>	<ul style="list-style-type: none"> Extended government loan maturities, converted overdue & penalties into equity in 1998 Channels loans in which Gol is the primary obligor to lenders (2-step loan) Law No. 19/2003: Obligation to provide subsidy to PLN Gol injected equity to fund development plans: Rp3.9 trillion in 2009 and Rp2.3 trillion in 2010 Irrevocable and unconditional guarantee on loans for FTP I Presidential Regulation No.8/2011: Gol raised the electricity tariff effective July 2010 In 2010, Gol approved a Rp7.5 trillion loan to finance a portion of PLN's capex for certain projects 	<p>Subsidy Calculation</p> <p>Costs covered by Subsidy</p> <ul style="list-style-type: none"> Power purchases Fuel and lubricants Maintenance Personnel Administration Depreciation Financing costs <p>Plus...</p> <p>8% PSO Margin based on Unit Cost in each voltage level</p> <p>Minus...</p> <p>Electricity sales</p> <p>Equals...</p> <p>Electricity subsidy</p>
<p>Close Involvement of Indonesian Government</p>	<ul style="list-style-type: none"> Gol is involved in almost every critical stage of PLN's operations: budget setting, capital expenditure plans, IPP developments and primary energy supply Direct and close involvement of various ministries, such as the Ministry of State Owned Enterprises, Ministry of Energy and Mineral Resources, Ministry of Finance and Ministry of the Environment Government agencies (i.e. the Board of Finance & Development Control - BPKP, Corruption Eradication Commission (KPK) and Attorney General Office) assist in implementing Good Corporate Governance 	
<p>Timely & Adequate Subsidies</p>	<ul style="list-style-type: none"> MoF Regulation No. 111/PMK.02/2007 and its amendments: Blanket Subsidy Continuous review ensuring adequate and timely subsidy payments 8% margin for 2010 and 2011 approved 	

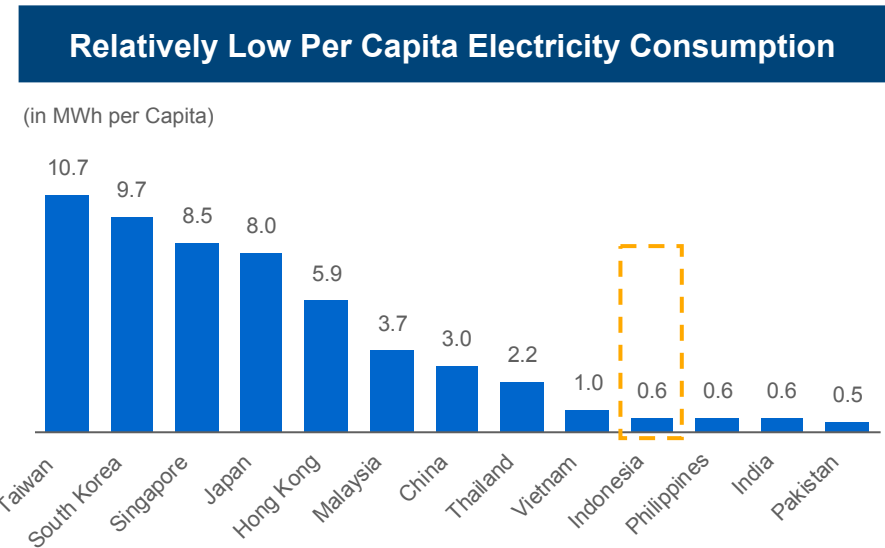
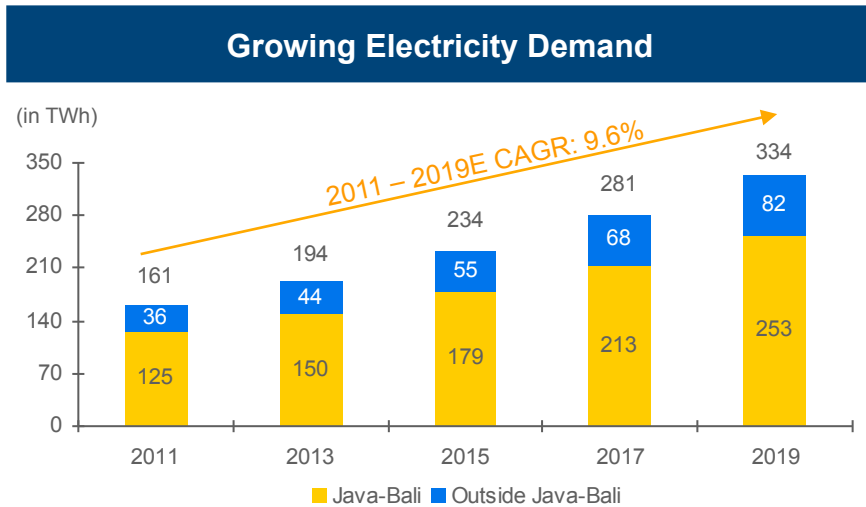
Total Government Subsidy to PLN⁽¹⁾
(Rp. in trillion)



Note: (1) Government's electricity subsidy as a result of audit by state auditor, except for 1H2011 which is the subsidy accrued for the first half of 2011.



Backed by strong macroeconomic indicators, energy demand in Indonesia is expected to grow significantly in the next few years.



- With higher income levels, increasing urbanization and improving standard of living, electricity demand has increased
- Ongoing transformation from an agricultural to a manufacturing-oriented economy has also played a particularly important role in the growth of demand for electricity

- Indonesia's per capita consumption of electricity, electrification levels and the installed capacity levels are among the lowest in Asia
- Need for substantial increase in generating capacity is evident by increasing number of power outages in recent years

As the major provider of electricity in Indonesia, PLN expects to benefit from Indonesia's growth in demand for electricity.

Source: PLN, EIU.



1 Strong Government Support :Subsidy and Letter of Guarantee

2 Dominant Presence in the Indonesian Electricity Market

3 Benefit From a Fast-Growing Indonesian Electricity Market

4 Efficient Operations with Continuing Improvements

5 Stable Financial Profile

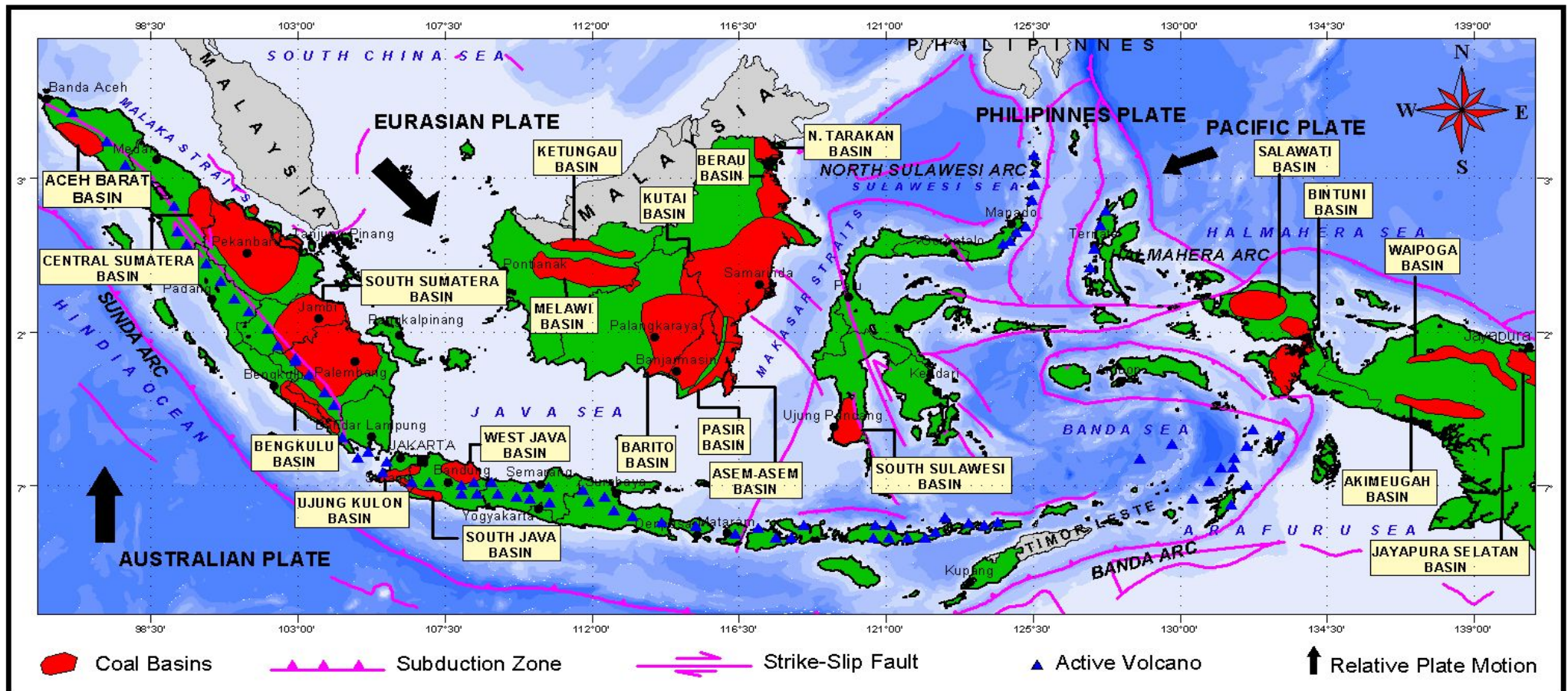


2. Coal Overview

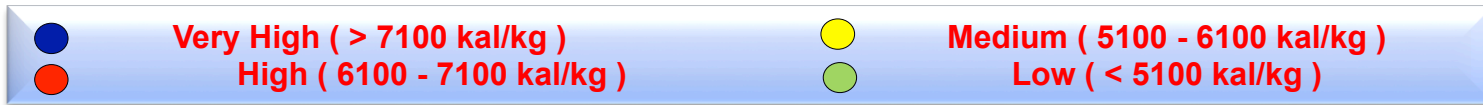
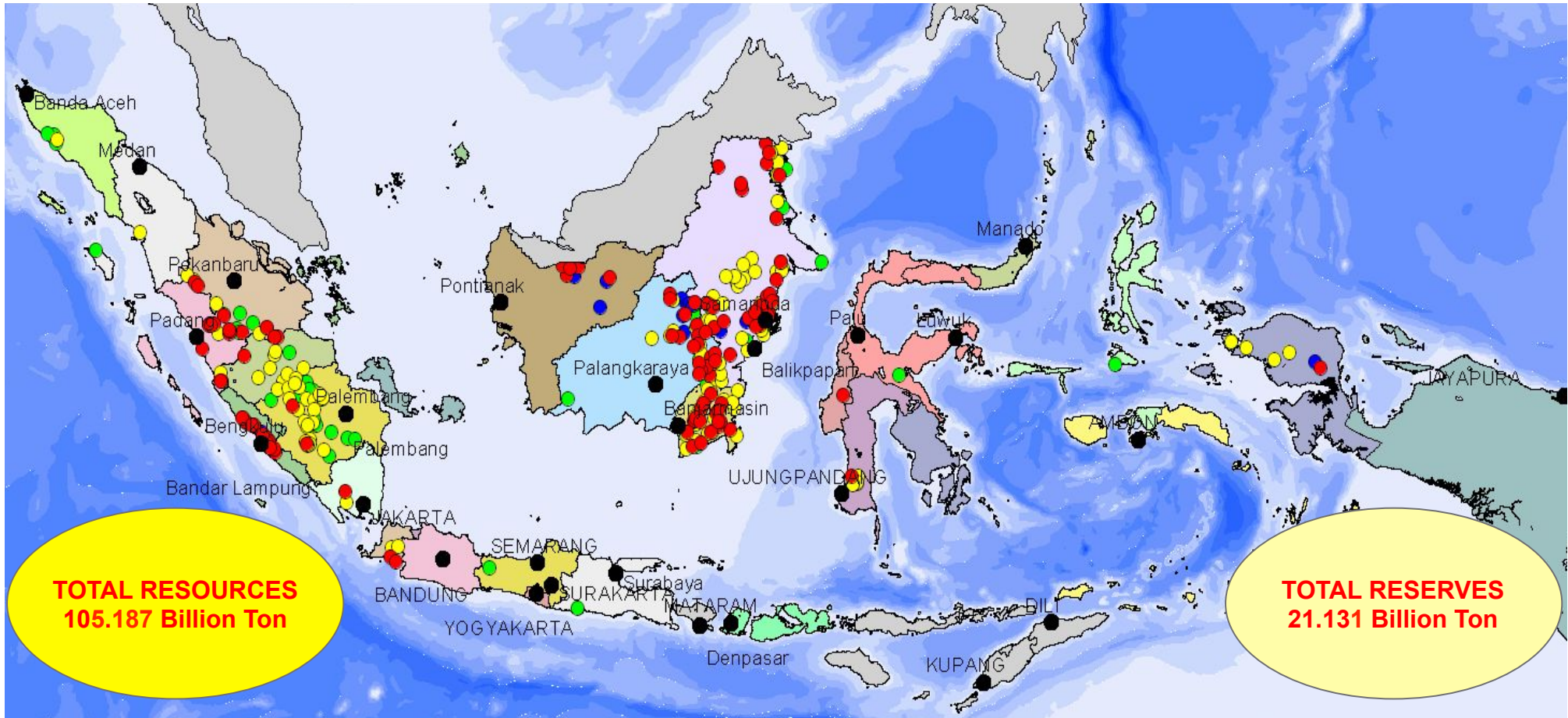




INDONESIA COAL POTENCY



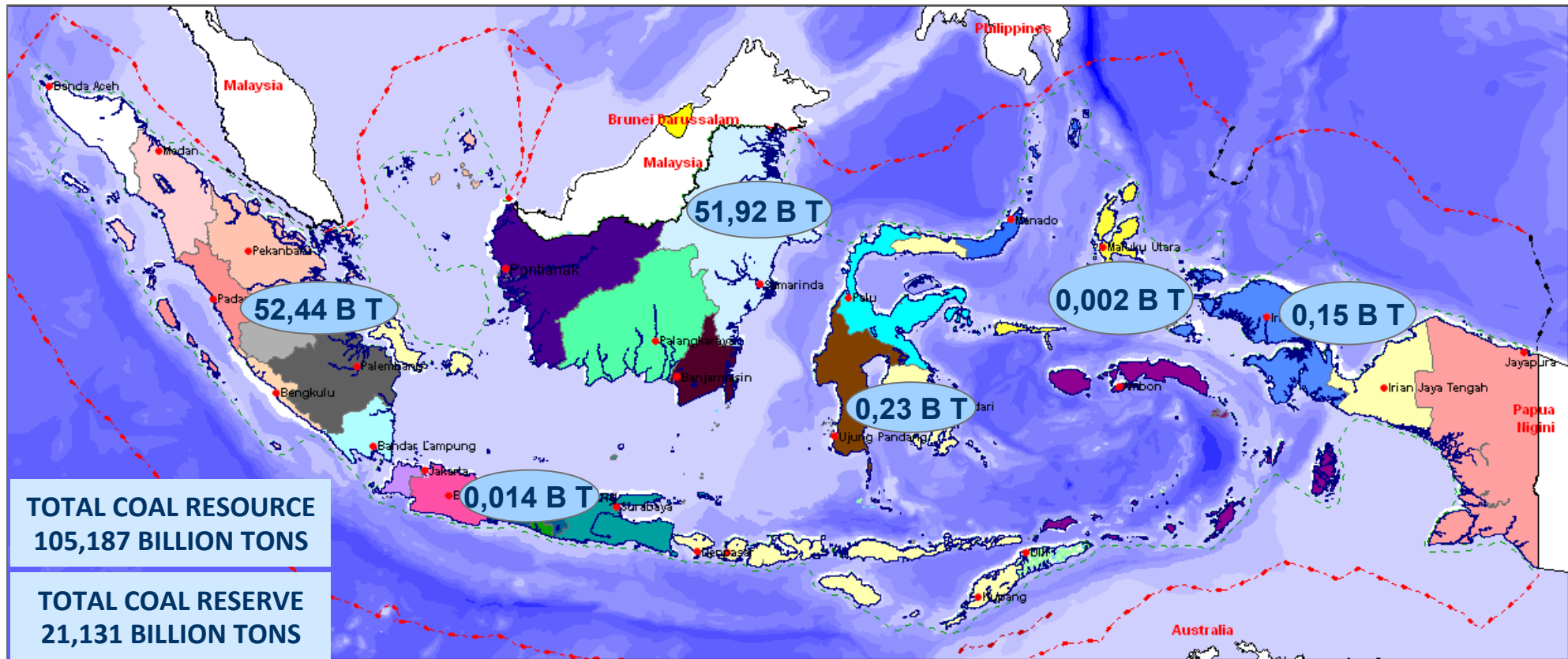
DISTRIBUTION OF INDONESIA COAL



Source: Geological Agency, 2010



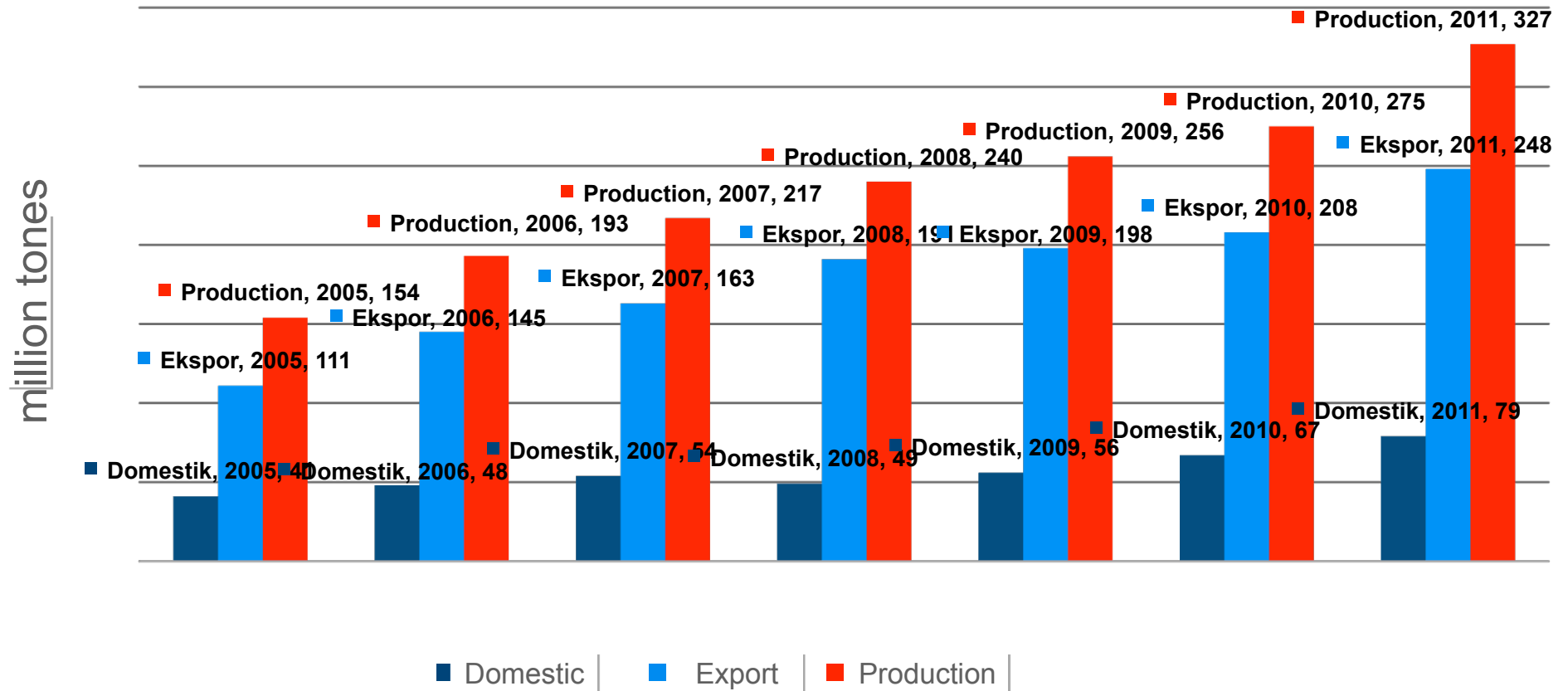
INDONESIA COAL RESOURCES AND RESERVE



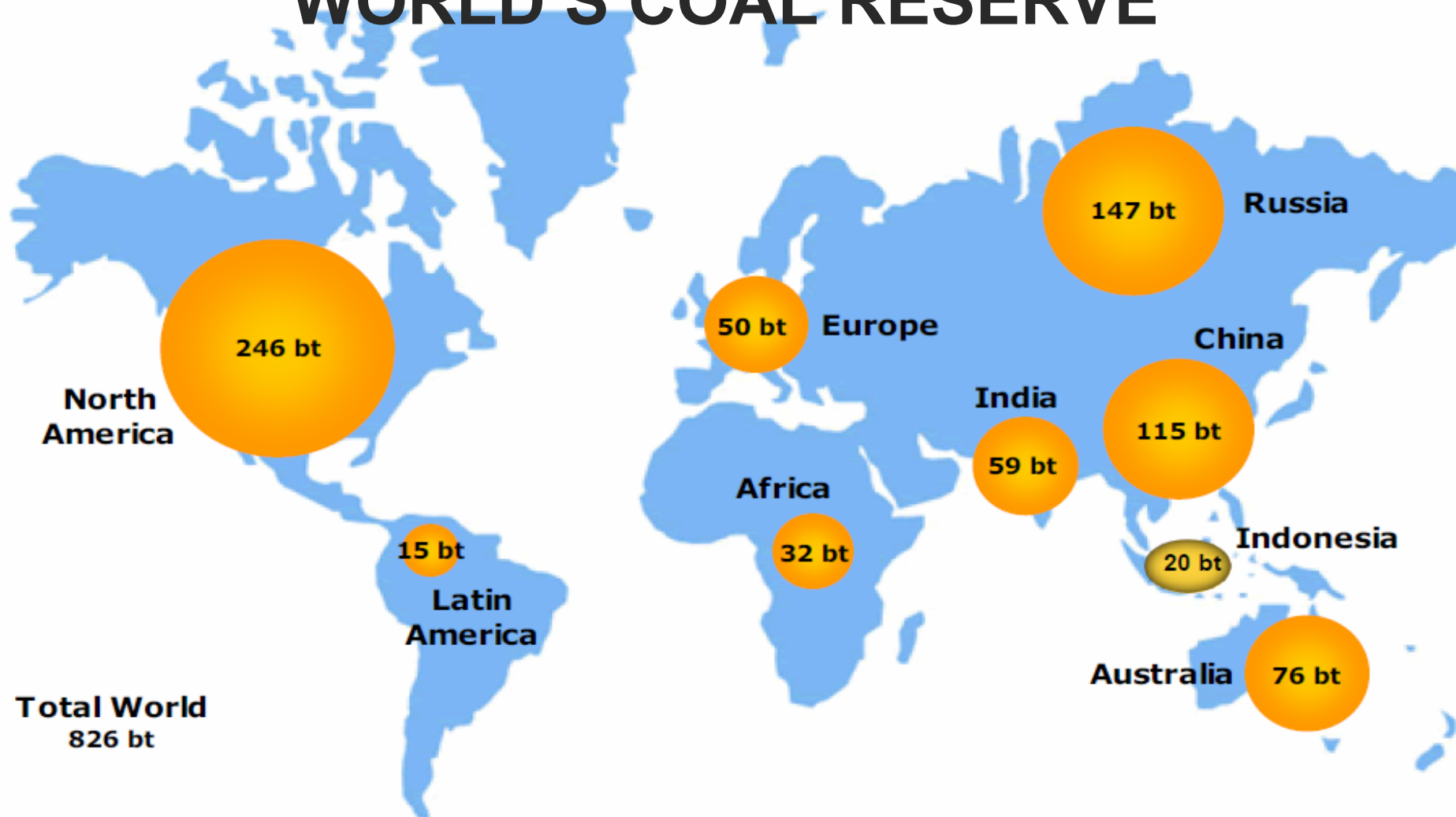
GEOLOGICAL AGENCY, 2009

REALIZATION OF COAL PRODUCTION, DOMESTIC, AND EXPORT (2005 – 2011)

Realization



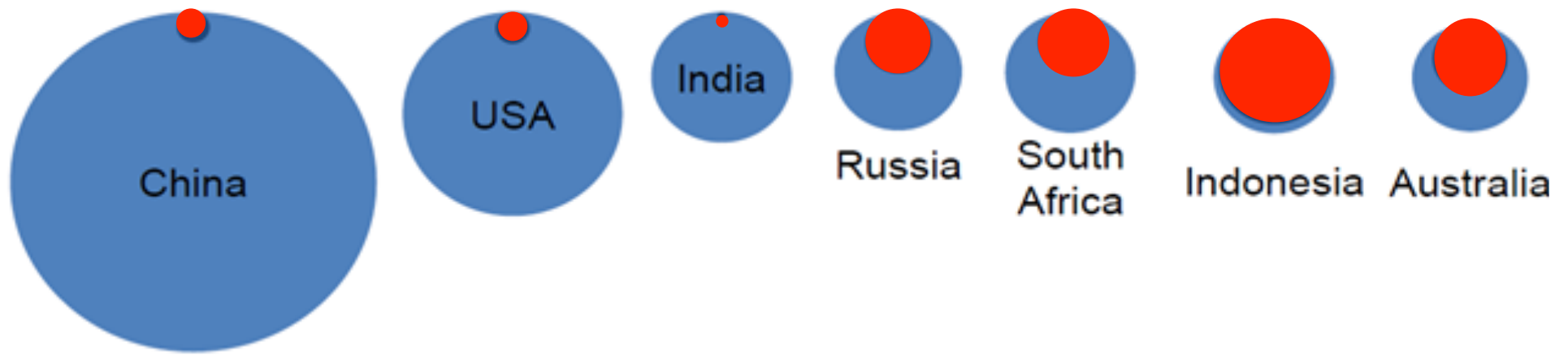
CURRENT CONDITION WORLD'S COAL RESERVE



Source: Indonesian Coal Mining Association, BP Statistics



Indonesia is the Biggest Coal Exporter in the World



Source: Wood Mackenzie Coal Supply Service, ANZ

Coal Demand and Supply Forecasts



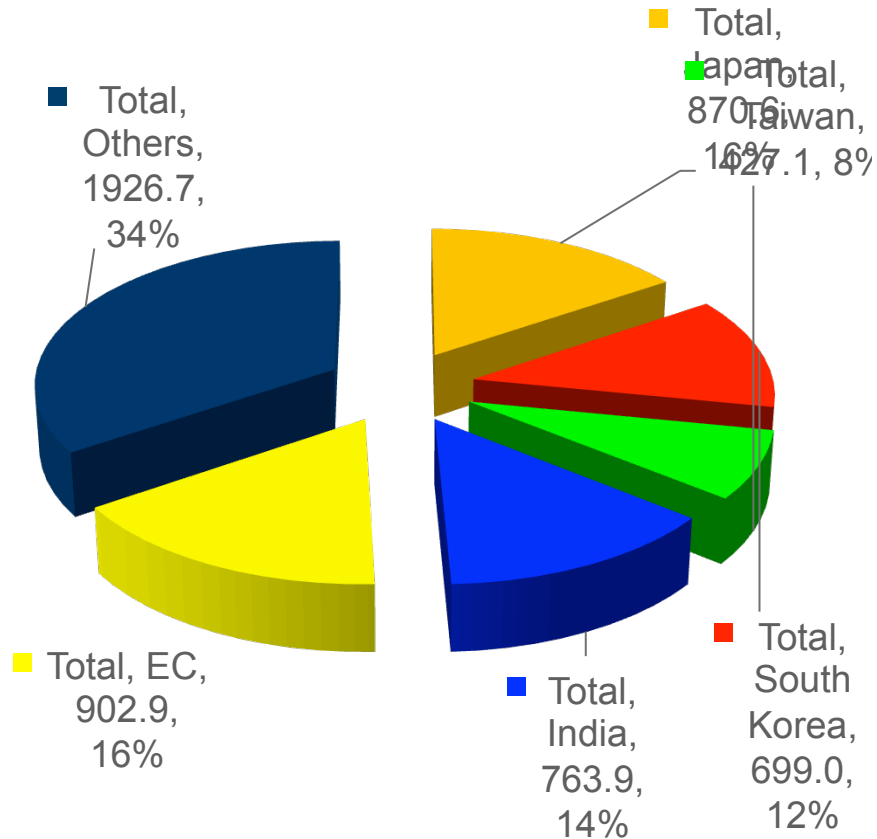
DEMAND (Mt)	2010	2011	2012	2013	2014	2015	2016
Japan	119.6	113.2	123.8	125.5	127.3	128.4	132.8
South Korea	89.1	86.0	91.4	97.2	103.8	110.8	120.7
Taiwan	53.2	62.4	62.4	62.4	62.4	62.4	61.9
India	48.6	95.6	118.4	127.7	130.3	126.2	117.1
EC	108.7	127.4	132.2	131.8	134.6	133.3	135.1
Others	241.1	223.5	238.8	261.9	288.3	330.9	342.3
Total	660.4	708.0	767.0	806.5	846.7	891.9	909.9
SUPPLY (Mt)	2010	2011	2012	2013	2014	2015	2016
Australia	140.9	152.9	177.5	186.6	200.5	215.6	219.8
South Africa	70.0	73.0	74.0	77.0	80.0	82.3	82.0
Russia	80.4	88.1	96.4	102.6	102.6	117.2	118.4
Indonesia	215.5	242.0	265.0	300.0	320.0	323.6	341.9
Columbia	62.0	64.0	69.1	69.1	69.1	75.2	79.2
Vietnam	24.0	20.0	25.8	22.0	23.0	20.7	19.4
Others	57.0	67.8	54.8	44.5	48.8	47.9	51.0
Total	649.7	707.8	762.6	801.8	844.1	882.5	911.8
IMPLIED MARKET BALANCE	-10.7	-0.2	-4.4	-4.7	-2.7	-9.3	1.9

Source : Wood Mackenzie, Tex Report, Platts, Citi Investment Research and Analysis, 8 January 2012

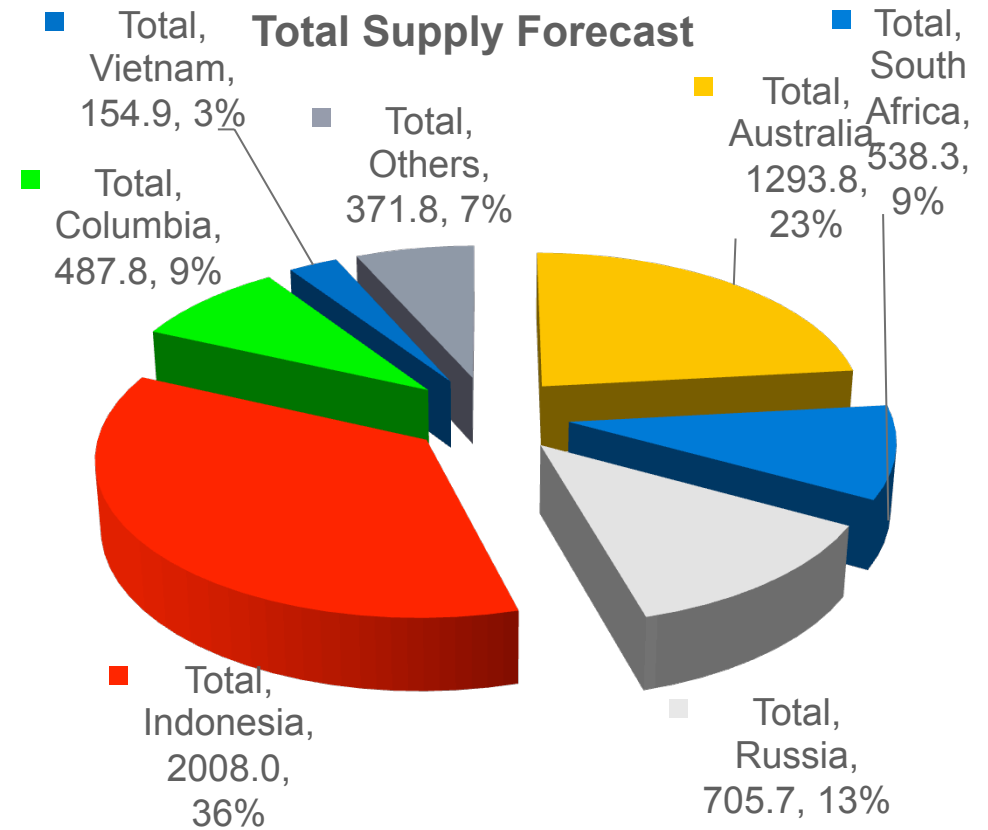
Demand and Supply Forecast



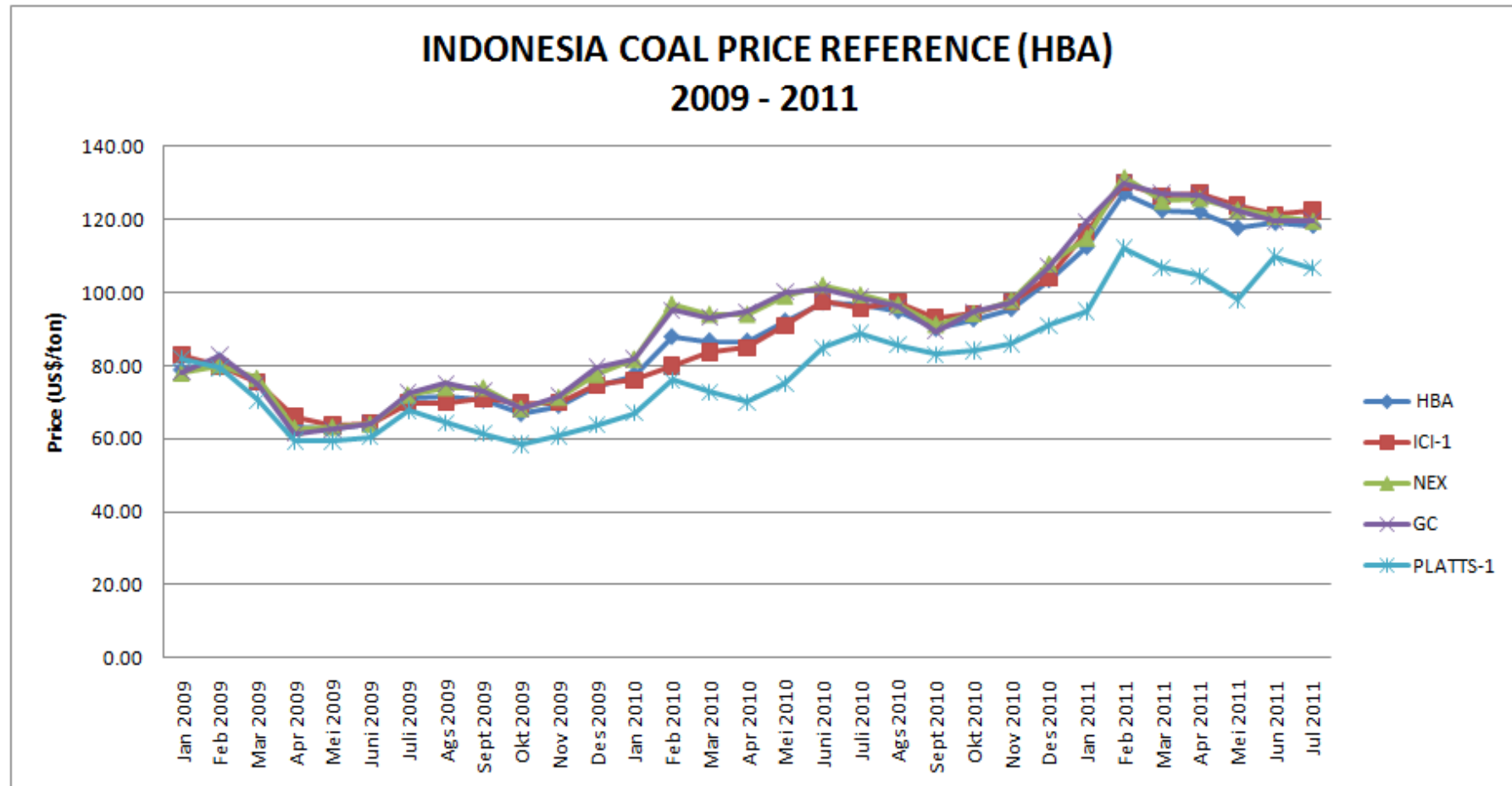
Total Demand Forecast



Total Supply Forecast



COAL PRICE POLICY



Note: calculated in 6322 kkal/kg GAR



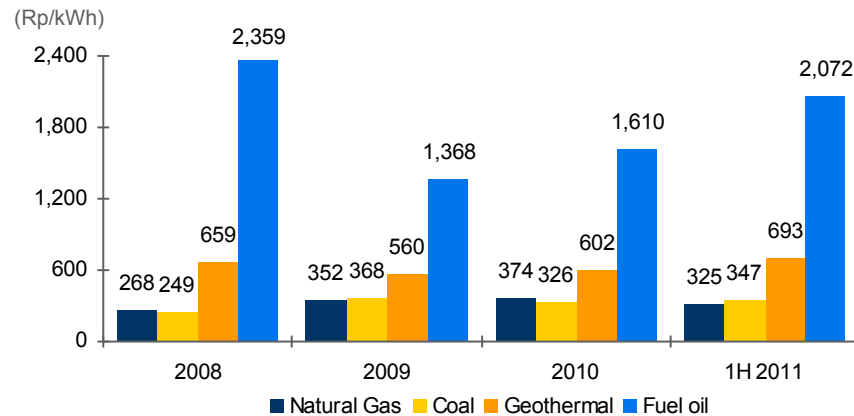
3. Update 1000 MW - FTP Phase I



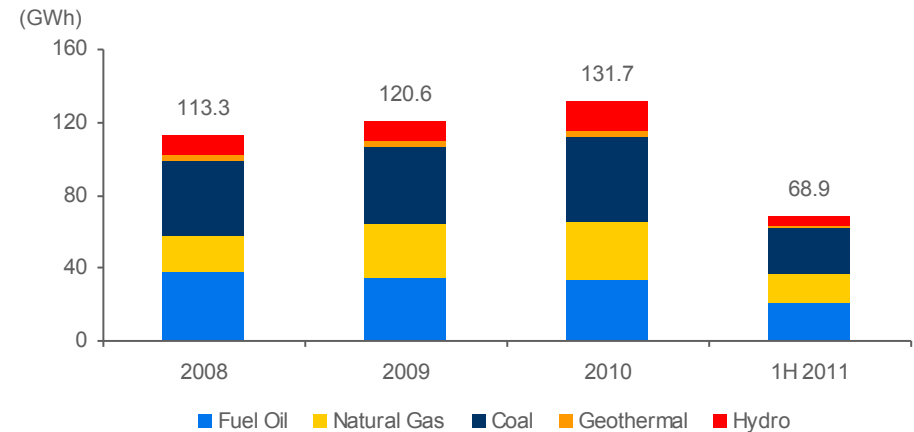
Rationale for Fast Track Program – Fuel Mix Improvement



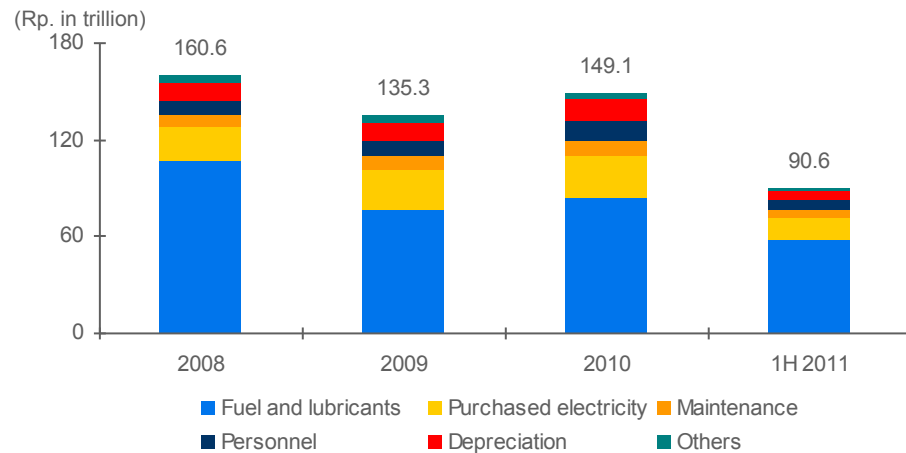
Fuel Cost Comparison



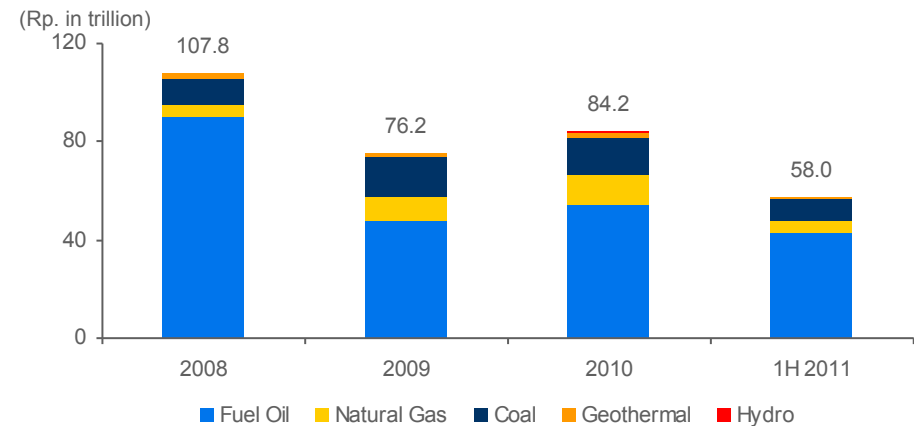
Production by Fuel Source



Operating Expenses Breakdown



Breakdown of Fuel and Lubricant Costs



The Fast Track Program is designed to reduce PLN's reliance on fuel oil, which currently is PLN's most expensive fuel cost of electricity on a per-kWh basis.

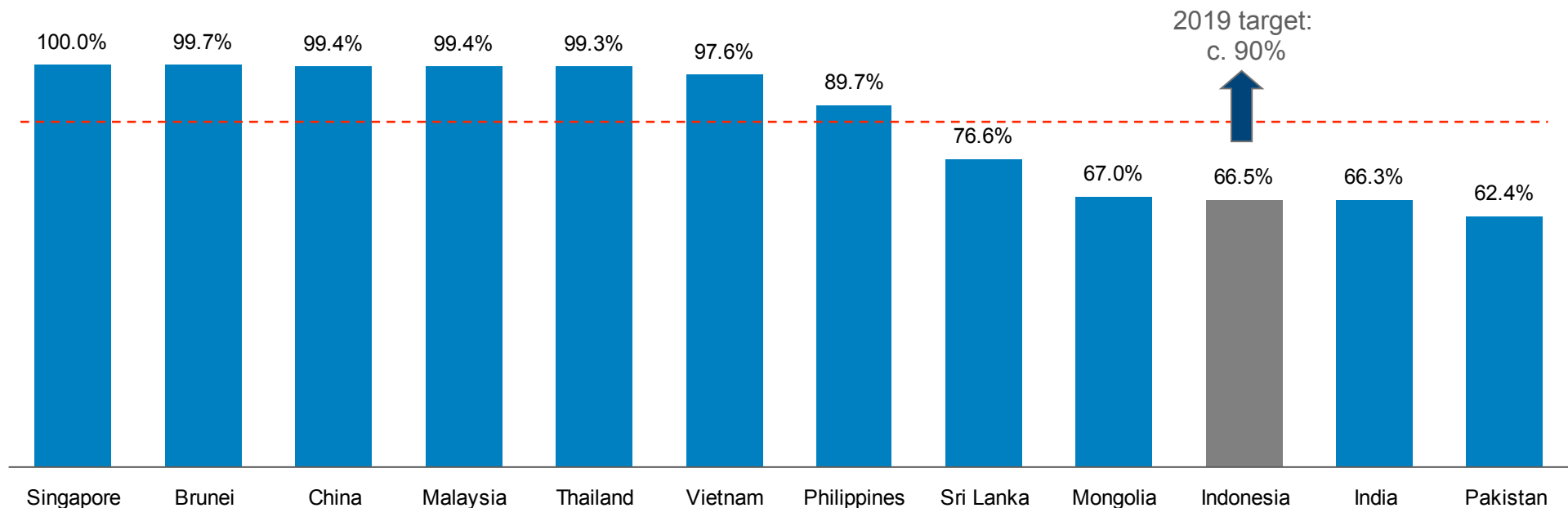
Electrification Ratio Demonstrates Room for Growth



Ample room for growth in electricity sector based on current Electrification Rate⁽¹⁾ in Indonesia.

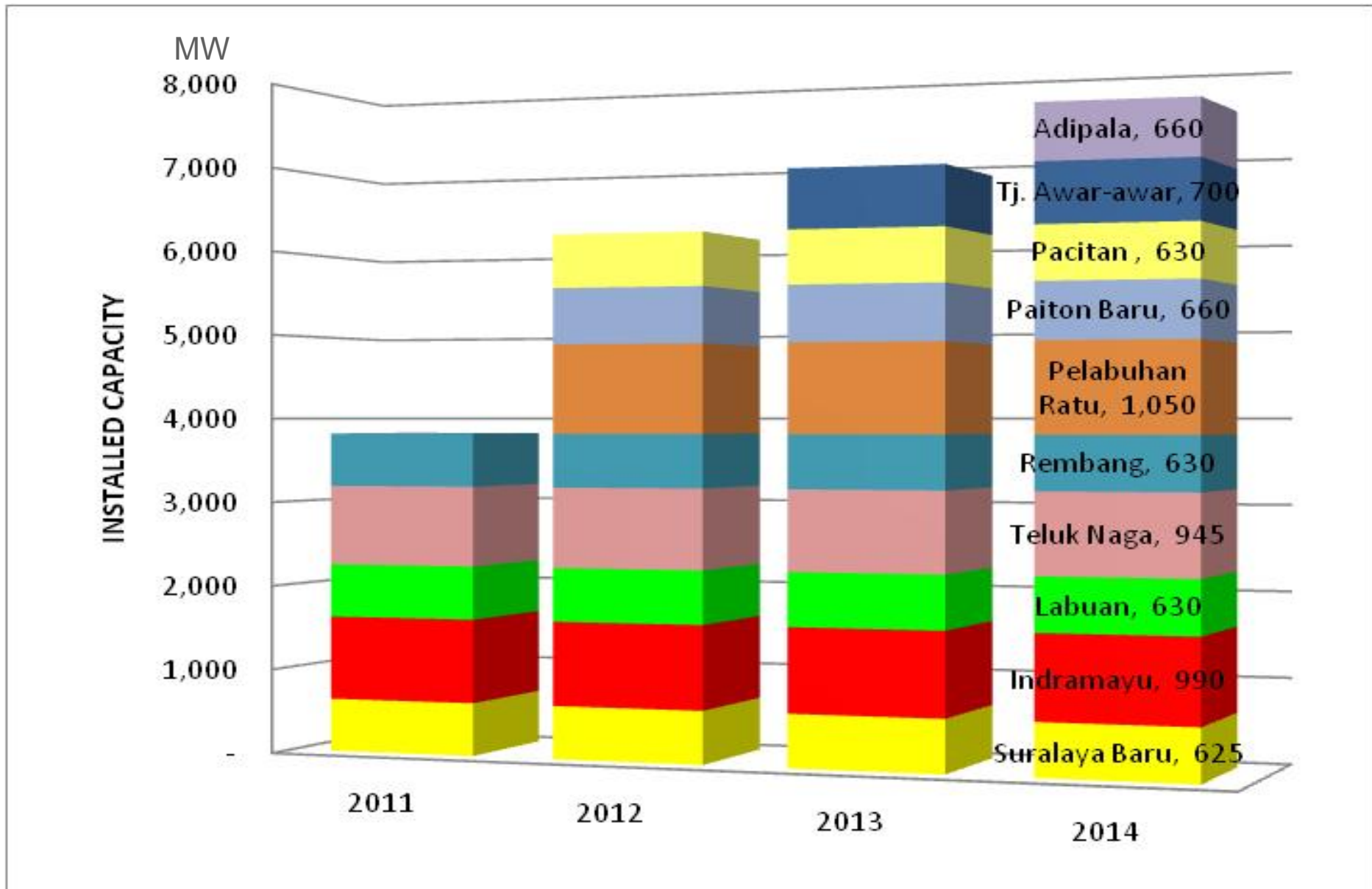
- Low electrification ratio of 66.5% (as of end 2010) underscores undersupply
- PLN is mandated to implement Fast Track Programs for capacity expansion to meet Indonesia's growing demand
 - Aim to achieve >90% electrification rate by end-2019
 - The role of IPPs in providing domestic power will also become increasingly important as the domestic electricity consumption increases

Electrification Rate for Asian Developing Countries (2009)

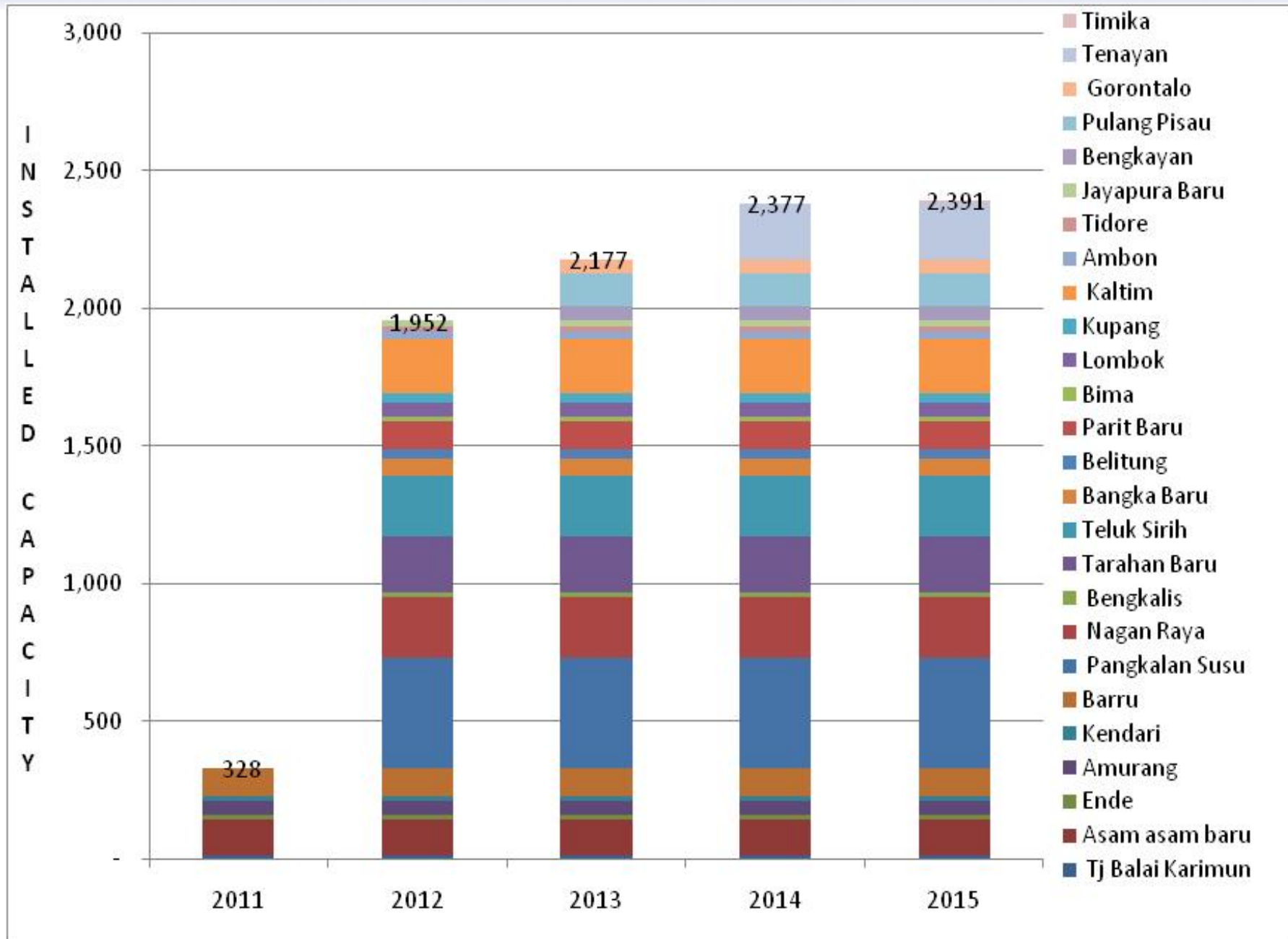


Source: IEA, World Energy Outlook 2010.
(1) Percentage of population with electricity access.

COD Update of Fast Track Program Phase I 10.000 MW Java



COD Update of Fast Track Program Phase I 10.000 MW Outside Java





4. Coal Policy in PLN





COAL DIVISION IN PLN

Vision :

Guaranteeing the sustainable of coal supply to support operational power plant

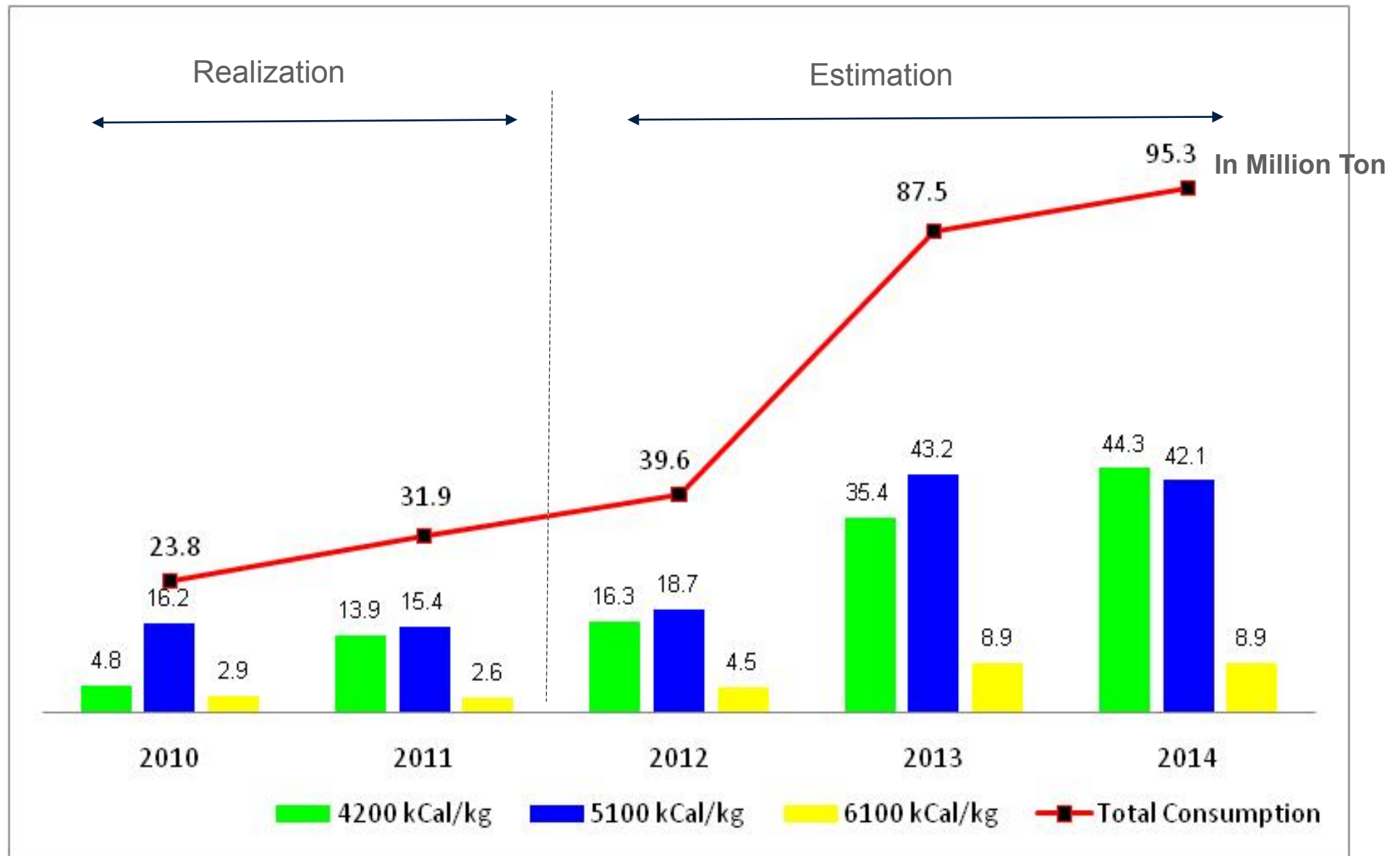
Mission :

- + To guarantee a security of coal supply
- + To manage coal contract
- + To plan demand and supply of coal, yearly and long term
- + To coordinate coal suppliers and power plant need in monthly and yearly meeting
- + To implement clean coal technologies.

Measures :

- + Quantity fulfills security of the stockpile
- + Quality match to boiler specification and environmental regulations.
- + Timing, not delay and not too early

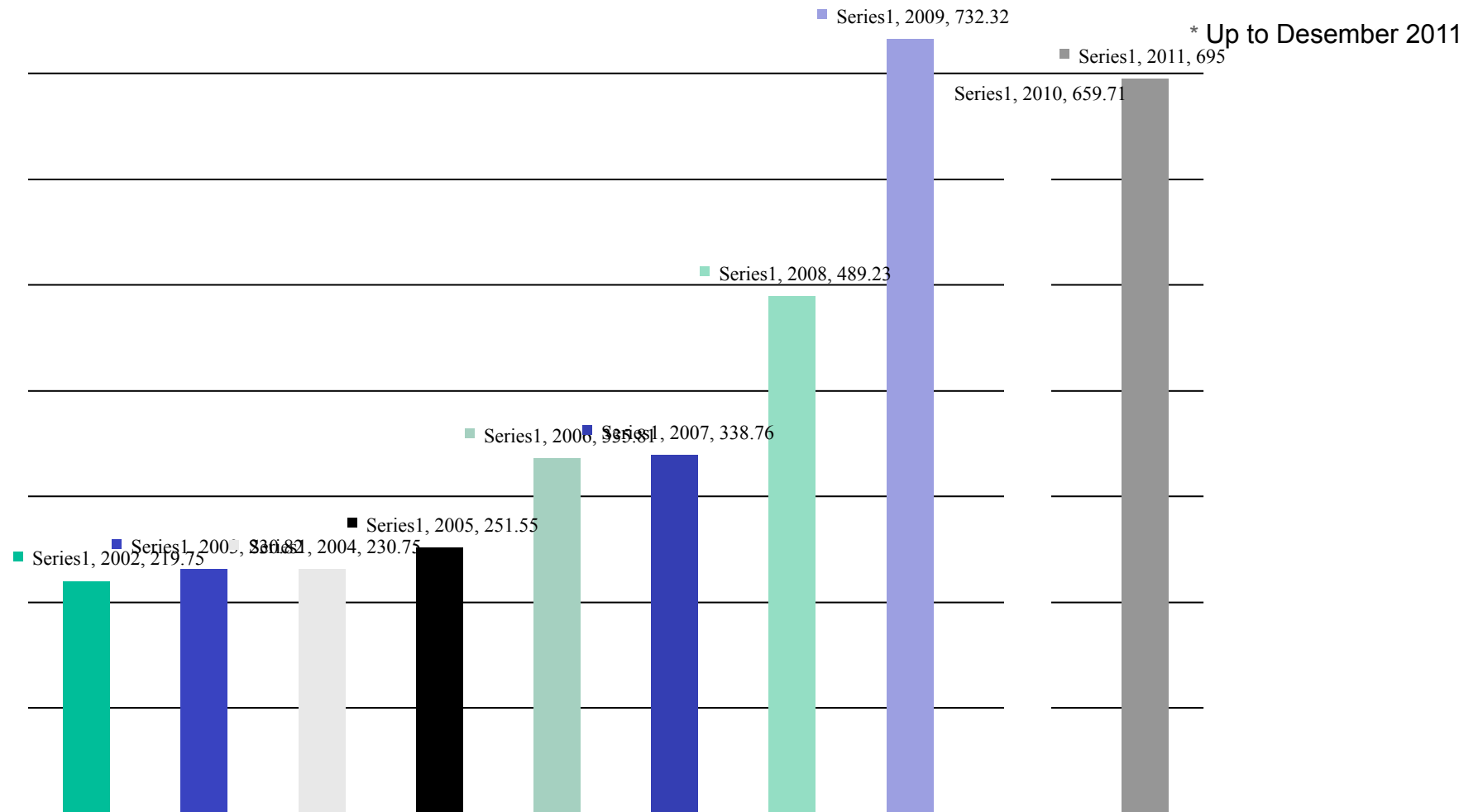
Estimated Coal Consumption for Electricity (PLN)





Average Coal Price bought by PLN

Rp/kg



TARGET & REALIZATION DMO



(Domestic Market Obligation)

Million Ton

Year	Target	Realization
2010	54.2	23.8
2011	64.79	31.9*

*up to December 2011

Due to Completion Project Delay of PLN and IPP



COAL SUPPLIERS to PLN 2011

Total Coal Contracted **69,56 Million Ton**,
69.3% from Suppliers in **DMO 2011 List** and **30.7%** from suppliers not in **DMO 2011 List**.

Suppliers in DMO 2011 List

No	Suppliers	DMO	Contract Volume
		kilo T /year	
1	Adaro	10,053	8,298
2	Arutmin	6,344	7,288
3	Berau Coal	3,996	4,065
4	PTBA	2,614	9,780
5	Indominco	2,771	1,908
6	Jorong	408	300
7	Kideco	6,434	8,355
8	KPC	11,178	7,640
9	Lanna Harita	342	215
Total		44,139	47,849

Supplier not in DMO 2011 List

No	Coal Suppliers	Contract Volume
		Kilo T / year
1	Anzawara	84
2	Batara Batari	1,121
3	Cenko	1,208
4	DGL	2,007
5	GGB	576
6	Hanson	3,078
7	KUB & DBS	239
8	Oktasan	1,359
9	PLN BB	3,094
10	PT BMP	1,758
11	PT KII	1,470
12	Rizki	975
13	Spot	300
14	TBI	240
15	Titan	2,383
16	WK Intrade	416
17	Kontrak Unit	900
TOTAL		21,207

PLN's Coal Supply Policy



1 To strengthen security of coal supply by :
✓ Long term supply contract
✓ Implementing online monitoring coal supply

2 To replace oil fuel by coal in fuel mix

3 Improvement in contract related to payment clause :
faster and transparent settlements

4 To increase coal quality using appropriate coal upgrading technologies to meet boiler's specifications and environmental regulations.

Security of coal Supply : Long term contract

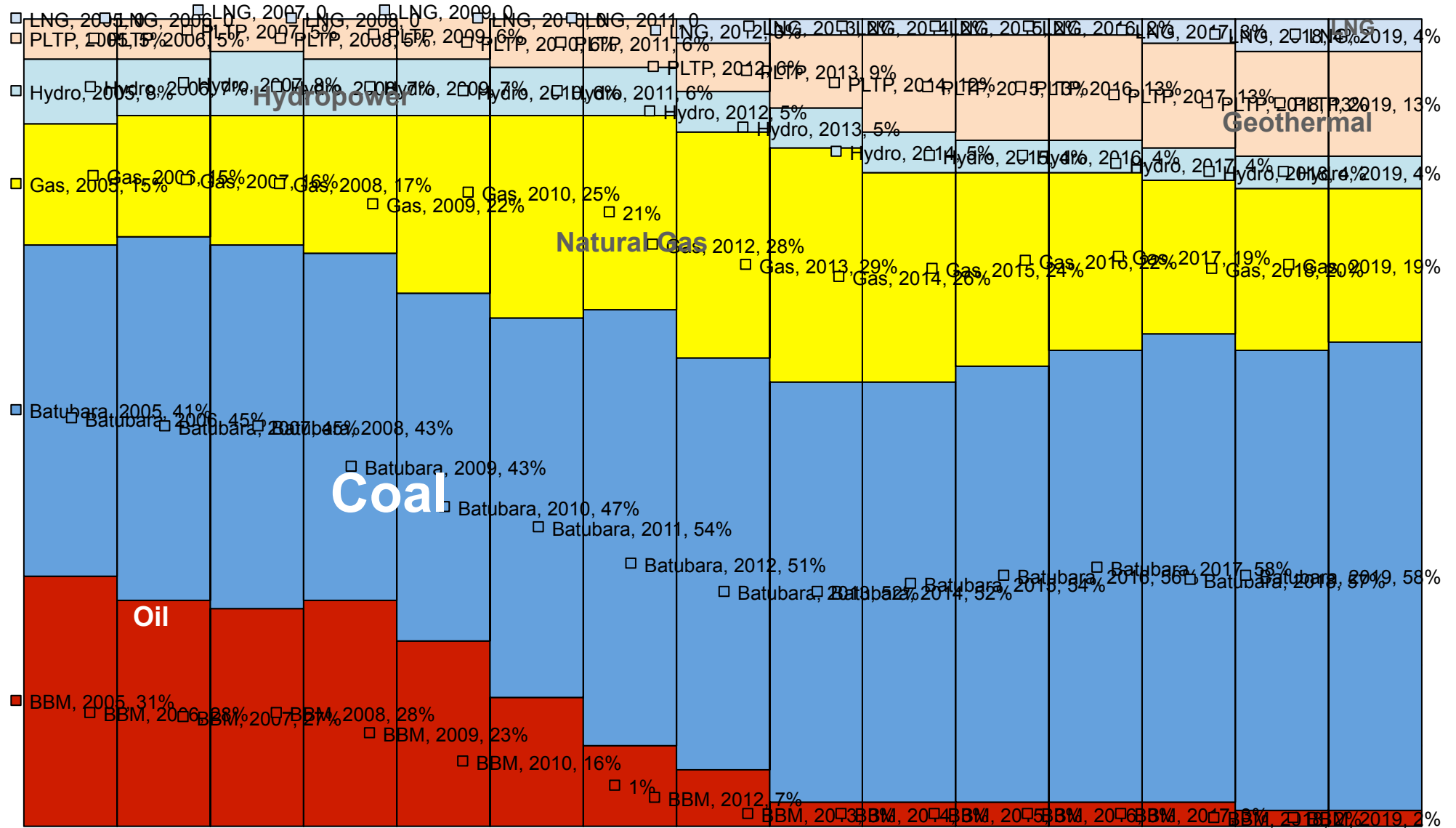


In Million Ton

	2011	2012	2013	2014	2015
HRC (5700 - 6000 kCal/kg GAR) :					
Demand	9.09	9.09	9.09	9.09	9.09
Contracted	10.49	10.49	10.49	10.49	10.49
Balance	1.40	1.40	1.40	1.40	1.40
MRC (4900 - 5200 kCal/kg GAR) :					
Demand	27.96	29.67	31.87	32.03	32.03
Contracted	28.27	32.50	34.26	34.76	34.76
Balance	0.31	2.83	2.39	2.73	2.73
LRC (3800 - 4500 kCal/kg GAR) :					
Demand	13.6	24.09	31.88	39.42	47.58
Contracted	23.97	28.26	33.11	35.00	35.00
Balance	10.37	4.17	1.23	-4.42	-12.58

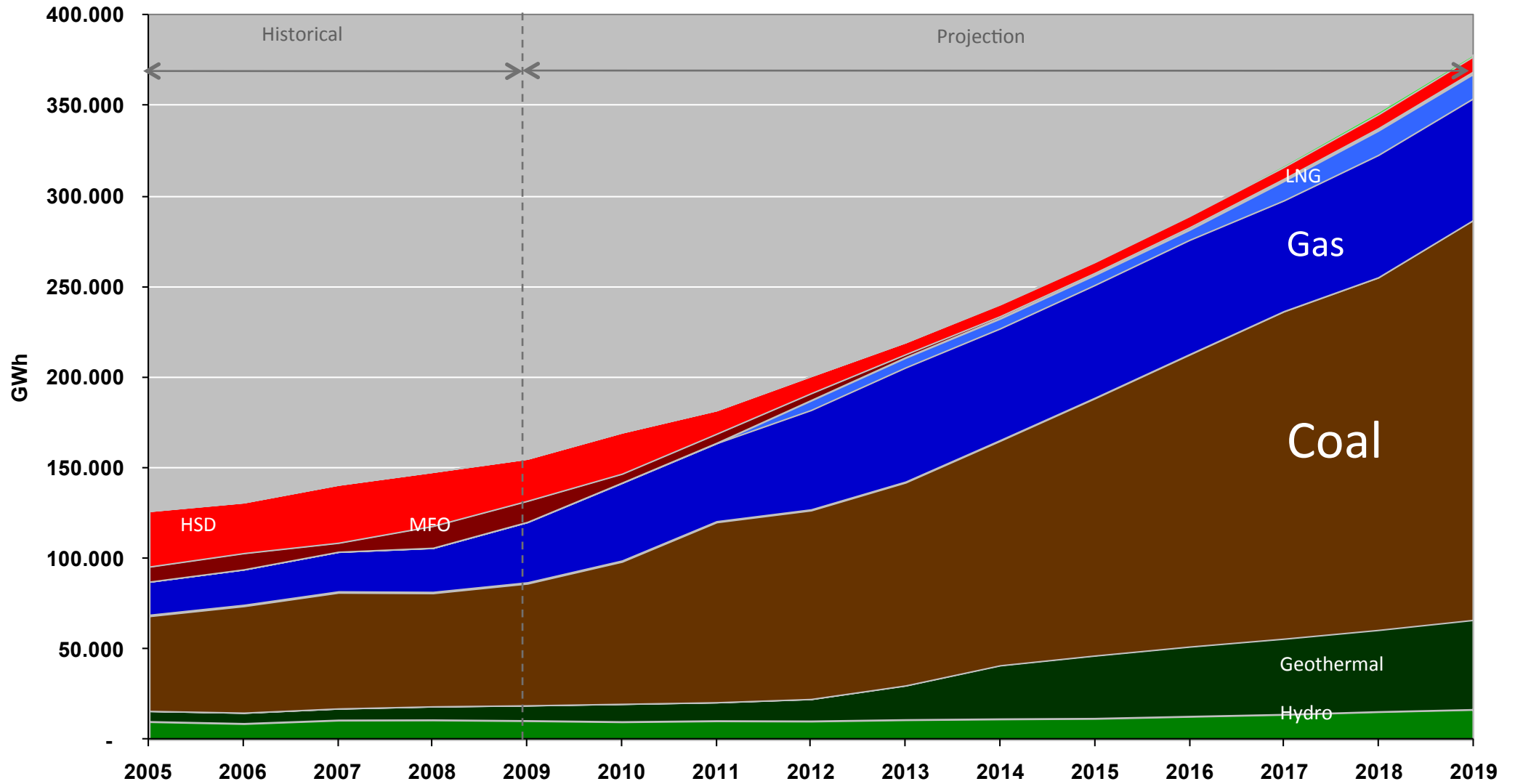


Fuel Mix 2005-2019 : Coal share to be increased





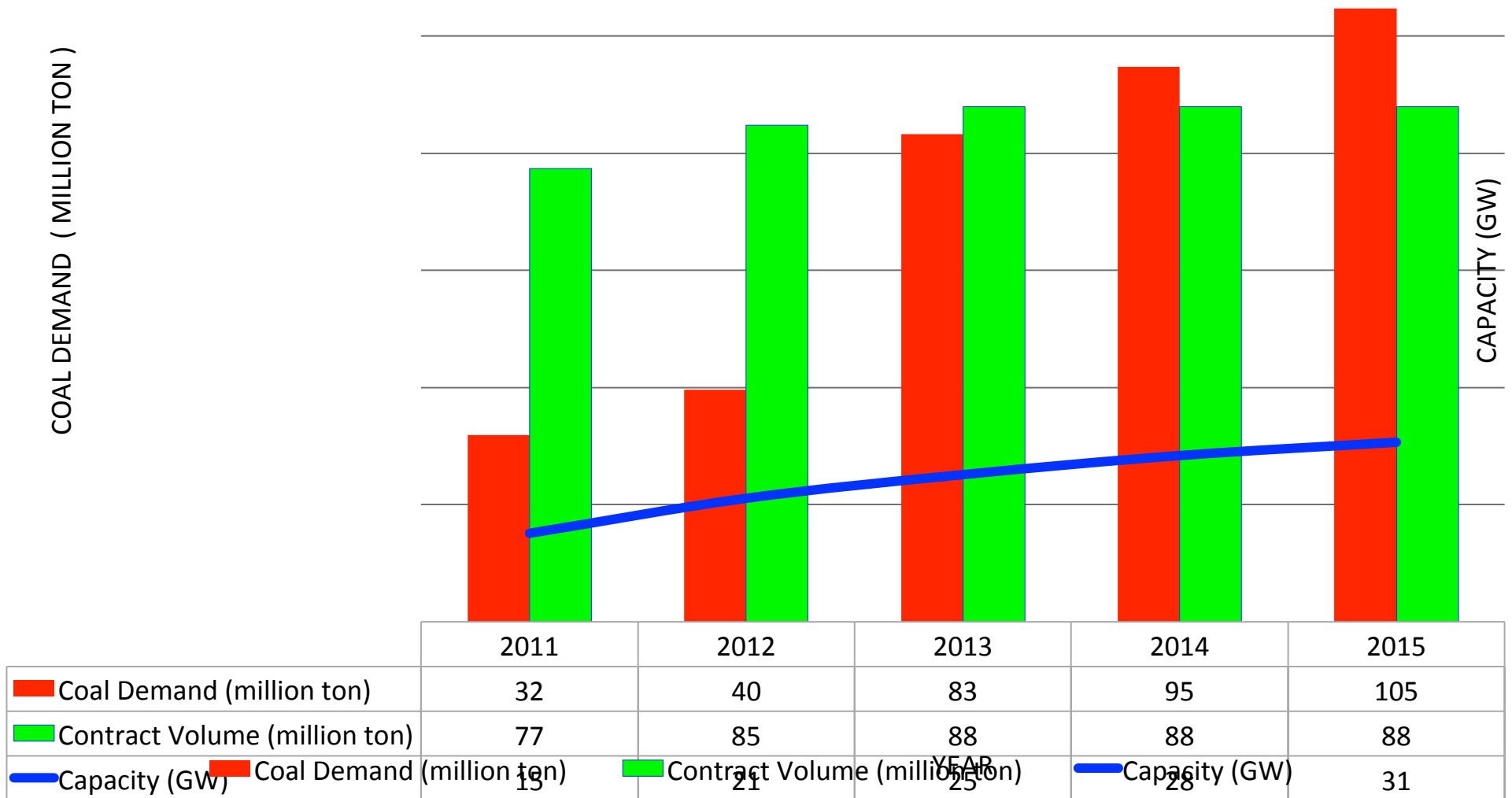
INDONESIA FUEL MIX 2010-2019



Coal Power Plant Capacity, Its Coal Demand and Coal Contracted Volume



Comparison Between Total Capacity Generated, Coal Demand and Contract Volume





5. Business Opportunities





Clean Coal Technologies

1. Coal Dryer Technology:

PLN Batubara is now constructing one coal dryer facility to be installed at PLTU Labuan site. The facility is expected to be able to increase coal quality up to 1000 kcal/Kg. **PLN still needs more Coal Dryers.**

Also, in Rembang PP, STD (Steam Tuibe Dryer) is studied by TSK (Tsukishima Techno Machinery co. Ltd).

2. Coal blending Facilities:

PLN is now under cooperation with a company to study the cost/benefit and prepare a plan of having the facility with production capacity of 10 million ton per year

3. Gasification Coal Power Plant:

It will be operated in east Kalimantan, hopefully next month.



Clean Coal Technologies

3. Slurry (Liquid Coal):

It will be launched at Sinarmas Group Power Plant (Private Company), Karawang - Jakarta, 22 March 2012. PLN has nominated to use the slurry at 5 Power Plants i.e.: Belawan PP, Tanjung Priok PP, Tanjung Perak PP, Tambak Lorok PP, Tello PP. **But, the slurry still need to be proven as for commercial technology.**

4. SynGas :

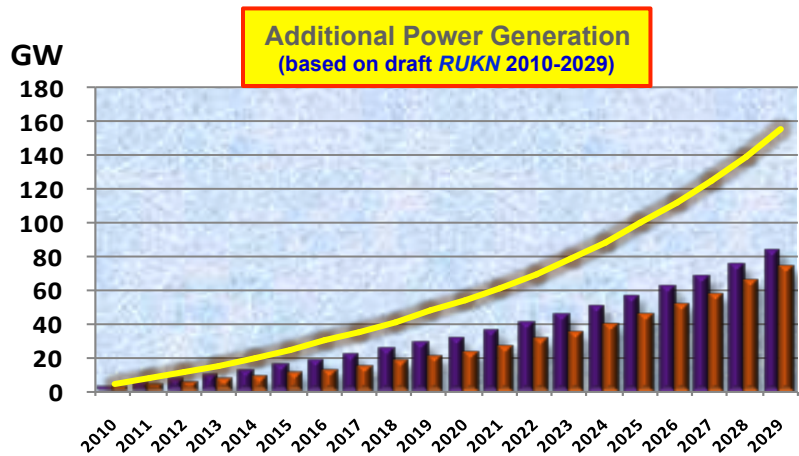
SynGas products 2 commodities i.e.: Hot steam for oil lifting of PT PERTAMINA (State Oil co.) and Gas for PGN (State Gas co.) which directly passthrough to PLN.

5. Human Resource Training and related business.

NECESSITY FOR PRIVATE POWER PARTICIPATION



- ❑ Growth rate of demand for electricity is still high (9.5% p.a up to 2029).
- ❑ Electrification ratio is still low (67.2% in 2010).
- ❑ Lack of electricity supply in some areas/regions.



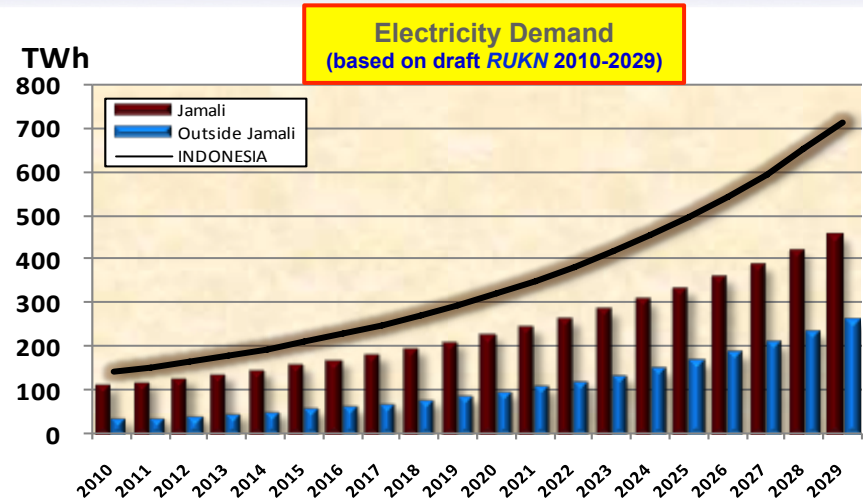
NEED A HUGE OF ADDITIONAL CAPACITY (estimated of 7,800 MW p.a during 20 years), investment required approx. USD 11.4 billion p.a)

BUT

THEREFORE

- ❑ PLN's investment capability is limited (around 20%)
- ❑ The Government budget for infrastructure is very limited.

- ❑ Privates sector participation are required:
 - Engineering, Procurement and Construction (EPC)
 - Independent Power Producer (IPP) Project
 - Public Private Partnership (PPP) Project



Investment Requirement
(based on draft RUKN 2010-2029)

	Million USD		
Infrastructure	JAMALI	Outside JAMALI	Total
Generation	121,217	79,607	200,824
Transmission Line and Substation	9,180	5,844	15,024
Distribution Line	6,546	4,728	11,275
Total	136,944	90,179	227,122

Note: RUKN : National Electricity General Plan
 FTP-1 : Fast Track Program 10,000 MW Phase I
 FTP-2 : Fast Track Program 10,000 MW Phase II



CONCLUSION

- ❑ Indonesia electricity demand is still high thus need a huge additional capacity of generation, transmission and distribution.
- ❑ The government encourages participation of private sector to cooperate with PLN through EPC project, IPP project and PPP (Public Private Partnership) project.
- ❑ The government is committed to maintain the PLN's financial viability in order to meet its obligations to other parties, by **providing subsidy**.
- ❑ For the next 10 years, the electricity supply in Indonesia is still relying on CFPP (Coal Power Plant), it is because the availability of coal abundant as primary energy and cost of production is relatively cheap compare others power generation, but still taking into account of environmental sounds.
- ❑ PLN is the biggest coal buyer in Indonesia i.e.: 57 million Ton in 2012, and >100 million Ton/year after 2015.
- ❑ **PLN needs Clean Coal Technologies and Fund from offshore.**



FEEDBACK to METI

- ❑ All Japanese companies and their Fund companies should play significant role in approach to Indonesian Government, especially in electricity sectors for EPC, IPP, or PPP projects.
- ❑ Chinese's Electricity Equipment product is more likely cheaper than Japanese's products, but the quality has likely not yet proven. The fact, we suffer from project completion delay.
- ❑ **PLN needs best quality, best price and long lifetime Electricity Equipment.**



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